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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,394	01/02/2004	Soo-Sang Yang	103-1002	2854
38209	7590	03/27/2006	EXAMINER	
STANZIONE & KIM, LLP 919 18TH STREET, N.W. SUITE 440 WASHINGTON, DC 20006			FANTU, YALKEW	
			ART UNIT	PAPER NUMBER
			2838	

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/749,394

Applicant(s)

YANG ET AL.

Examiner

Yalkew Fantu

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2004.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
4a) Of the above claim(s) 6-9 and 20-27 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5, 10 and 28-30 is/are rejected.
7) ☒ Claim(s) 11-19 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 02 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01/02/2004.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claims 6-9 and 20-27 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 02-09-2006.

Applicant's election with traverse of embodiment 1 in the reply filed on 02-09-2006 is acknowledged. The traversal is on the ground(s) that there is not as serious burden on the examiner. This is not found persuasive because contrary to applicants' remarks, a search for and application of prior art to the various species is in fact a burden on the office.

The requirement is still deemed proper and is therefore made FINAL.

DETAILED ACTION

Specification

The disclosure is objected to because of the phrases: " a power code connectable" on page 3 line 24. Examiner interprets as power cable or power cord

Appropriate correction is required.

Claim Objections

Claim 11-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 28-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 28 the phrase “ the charging terminals comprising a body having a conductive material electrically connected to an external power source” renders the claim indefinite because, the charging terminals does not connect to an external power source. The charging terminals are connected to the charging unit. It is the charging unit that has a connection to the external power. Claim 29 and 30 depend on claim 28; therefore they also contain the same error. The body 21 has a conductive material 25 connecting contact plate 23 to charging circuit 17.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 10 and 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Yoshikawa (US 5,892,350).

Regarding claim 1, Yoshikawa discloses a charging apparatus (Fig. 3 element 32) used with a mobile robot (Fig. 3 element 14) (Fig. 3) comprising: a rechargeable battery (Fig. 3 element 52), a contact terminal included in the mobile robot (Fig. 4A elements 56 and 57), and a charging unit including a plurality of charging terminals (Fig. 3A element 18; Col. 4 lines 51 ad 52) brought into electrical contact with the contact terminals (Fig. 3 elements 56 and 57) of the robot supply the charging current to the rechargeable battery (Fig. 4A element 52) of the robot. Each of the charging terminals comprising: a body and a head (Fig. 4B, element 18) coupled to the body to be brought into electrical contact with the contact terminals (Fig. 4A, elements 56 and 57) of the mobile robot (Fig. 4A).

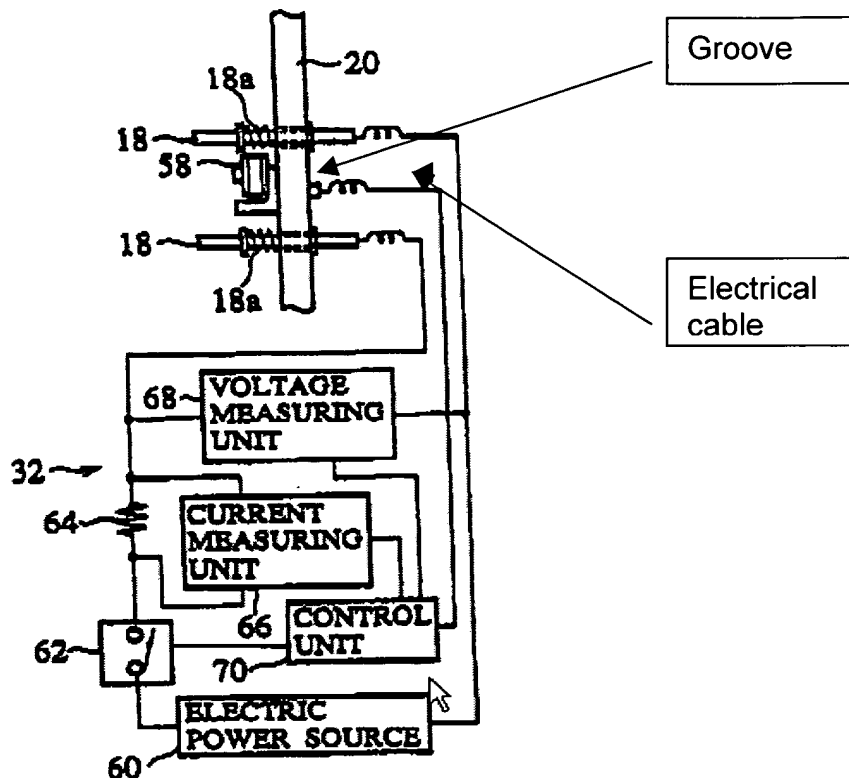
With respect to claim 2, Yoshikawa discloses charging apparatus according to claim 1, wherein the plurality of charging terminals (Col. 3 lines 51 and 52) arranged in a plurality of row (Fig. 4B element 18).

Regarding claim 3, a support shaft (Fig. 4A, element 18) to support the body, and an elastic member (Fig. 4A, element 18a) to restore the body to an original position.

Regarding claim 4, a groove is a hole in which the support shaft (Fig. 4B, element 18) fits.

With respect to claim 5, the charging unit (Fig. 4B element 32) comprises an electric cable coupled to a power source (Fig. 4B element 60), and each of the charging terminals comprises an electrical connecting member embedded in the body and the head to electrically connect to the electric cable (See Fig. 4B element 18)

With respect to claim 10, a charging apparatus (Fig. 3, element 32) used with a mobile robot (Fig. 3, element 14) having a rechargeable battery (Fig. 3, element 52) and a contact terminal (Fig. 5, element 91 and 90), comprising a casing and a terminal mounting (Fig. 3, element 20); a charging circuit (Fig. 3, element 32) connectable to an external power source (Fig. 4B, element 60); a guide groove (see below) having a support member (Fig. 4B, element 18) to protrude from the terminal mounting (Fig. 3, element 20), and a head and a contact (Fig. 3, element 58), and electrically connected (see figure below for electrical cable) to the charging circuit (Fig. 3, element 32)



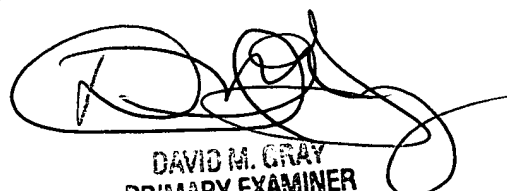
Regarding claim 28, Yoshikawa discloses a charging apparatus used with a mobile robot (Fig. 4A and 4B) comprising: a rechargeable battery (Fig. 4A element 52) a plurality of charging terminals (Fig. 4B elements 56 and 57) in the mobile robot (Fig. 4A) and a charging unit (Fig. 3 element 32) including a plurality of charging terminals (Fig. 4B element 18) disposed to contact corresponding ones of the contact terminals to supply a charging current (Col. 2 lines 17-24) to the rechargeable battery (Fig. 3 element 52) of the mobile robot (Fig. 3 element 14), each of the charging terminals (Fig. 4B elements 18) comprising a body, a conductive material electrically connected to an external power source (Fig. 4B element 60), and a head movable coupled to the body (Fig. 4A element 14, 56 and 57) having a contact mounted on a predetermined position

and electrically connected to the conductive material (Fig. 4B elements 54, 56 and 57) and to be brought into electrical contact with a corresponding one of the mobile robot (Fig. 4B elements 54, 56 and 57) .

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yalkew Fantu whose telephone number is 571-272-8928. The examiner can normally be reached on (M-F);(8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David M. Gray can be reached on 571-272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DAVID M. GRAY
PRIMARY EXAMINER